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PSOCIDS

ANNOYING HOUSE PESTS

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PSOCIDS, ANNOYING HOUSE PESTS

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The psocids (*Liposcelis divinatorius* (Müll.) and *Trogium pulsatorium* (L.)) that infest houses are tiny white or grayish-white insects scarcely as long as the width of an ordinary pinhead, and often much smaller. Their general appearance is shown in the illustration on the title page, which is about 50 times natural size. They run in a halting and uncertain manner over the exposed surfaces of almost any portion of the house or its furnishings. Being so small, they very often escape attention, but when they are abundant or swarm over dark surfaces they attract notice and are readily seen. Larger outdoor species have wings and are rarely found in houses.

Psocids Neither Bite Nor Carry Disease

Because psocids are small and resemble in size many kinds of lice that infest and bite man and his domestic animals and poultry, they are often confused with true lice. However, there are no authentic records of psocids biting man or annoying his domestic animals. When psocids are present in houses, nervous persons may imagine themselves bitten, but such a sensation is aside from the facts. Psocids have never been suspected of being disease carriers, and the notion that they are insects detrimental to the health of man may be dismissed.

Psocids Are Annoying but Not Harmful

The presence of psocids crawling over furniture, walls, clothing, beds, etc., is very annoying to the occupant of an infested home. But psocids do no physical harm to woodwork or house furnishings, or to commodities stored in warehouses or stores. In the past they have at times been credited with being responsible for a real damage to books, papers, and fabrics that should have been charged to the feeding of silverfish and cockroaches. During 20 years no authentic record of injury to house furnishings or to stored commodities has come to the attention of the Bureau of Entomology and Plant Quarantine. Many persons have definitely stated that they were unable to detect the slightest physical injury to their houses or to their furnishings, even though psocids were abundant.

Dampness with Warmth Favors Activity and Multiplication

The activity and increase of psocids are assoiated with dampness accompanied by warmth. Long spells of humid weather favor psocids. Usually they are most abundant in damp, dark rooms that have been closed or poorly ventilated. Furnace heat, however, with the resulting dryness of buildings, is detrimental to psocid life, and these insects are seldom annoying in the winter when buildings are kept continuously dry and warm. The cold of winter usually destroys the mature psocids in unheated rooms, but not their eggs. Psocids are often most abundant following several mild winters which have permitted them to remain active in houses.

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Psocids Are often Abundant in Sheltered Places

Psocids may be found crawling anywhere in the house. But in combating them it is necessary to remember that they are often abundant in wall spaces, behind the door and window frames, behind baseboards, between the floorings, and behind electrical and other fixtures and built-in equipment. This is particularly true in new buildings which have not had time to become thoroughly seasoned. In the average detached house they are apt to be found most abundant about damp vegetable products, such as straw mattresses, vegetable rugs or furniture, wallpaper, and pantry supplies.

Modern New Fireproof Buildings Are Sometimes Overrun by Psocids

Modern new fireproof apartment houses are sometimes overrun with psocids soon after completion and occupancy. This seems to be the result of favorable conditions for psocid increase due to moisture in the walls and floors resulting from this type of construction. Until this moisture has evaporated with the use of the building, owners may expect psocids to be present, through no fault of any person or of any one type of building material, but merely because the modern construction of such buildings creates in wall spaces conditions favorable for the increase of these harmless creatures. Old buildings of the same construction are not usually seriously infested.

Psocids Are of Many Kinds and Exist Outside Buildings

There are numerous kinds of psocids. Those with wings seldom find their way into houses. The kinds commonly found in homes are also found out of doors, and probably most of those found in small numbers in houses have come in from outside, as evidenced by the fact that they are often abundant on window sills and not elsewhere. But once inside, the common kinds are capable of reproducing themselves under house conditions during the warmer months.

Psocids Live on Microscopic Molds

The food of psocids seems to be for the most part the microscopic molds that are abundant everywhere. One house-infesting psocid (*Liposcelis divinatorius*) has been recorded as eating the eggs of the Angoumois grain moth. Psocids are said also to feed upon starchy materials. It is a well-known fact that psocids are frequently very abundant in commodities that have been stored under conditions that have encouraged mold growth. Microscopic molds abound on much furniture, and on wallpapers, straw mattings, trunks, and house surfaces in general, even in homes kept very clean.

Biology of Psocids

Studies made of the biology of one common house-infesting psocid (*Liposcelis divinatorius*) by workers in the United States and Europe have shown that only females are produced, reproduction taking place without the presence of males.

During the winter, in southern Louisiana and southern Italy, where the climate is mild, eggs hatch in from 11 to 28 days, each female produces from 7 to 44 eggs, and from 111 to 140 days are required to complete the development from egg to adult. During warm summer weather, wherever psocids are troublesome, their eggs hatch in from 4 to 11 days, and each female lays an average of about 60 eggs.

One female is known to have laid 98 eggs from June to October. Development from egg to adult may be completed in from 3 to 4 weeks during the warmer months.

Methods of Controlling House Psocids

No one application of a control measure is likely to prove satisfactory. Because psocids find their way into houses from outdoors, and in new or very damp buildings are present in wall spaces, between floors, behind door and window trim, and behind baseboards, electrical fixtures, and built-in equipment, the places of those killed in the rooms by sprays, powders, and fumigants are soon taken by others coming into the rooms from places not reached by control measures. Even the most thorough application of the most toxic insecticides applied by the most dependable pest-control operator cannot as a rule result in the speedy destruction of more than those insects that are in the room or in the easily accessible spaces immediately adjoining it. Common experience indicates that several applications are necessary to effect satisfactory control even when there is no great influx of psocids from outside.

The oil-pyrethrum sprays commonly found on the market, when applied with hand or power sprayers, are excellent for destroying psocids actually hit by them. The spray should be applied well to all cracks and crevices.

Pyrethrum or derris powder will kill psocids if blown into cracks and crevices about baseboards, door and window trim, cupboards, etc. These powders so used are not harmful to man or pets.

Sodium fluoride applied as a dust, as used for cockroach control, is also effective in killing psocids, **but care must be taken not to get this poisonous material on foods.**

Fumigation of infested houses may be desirable when drastic action must be taken, or when there is objection to the odors of sprays and the messiness of powders. **Fumigations should be placed in the hands of pest-control operators experienced in handling dangerous fumigants.**

When psocids are traced directly to such furnishings as straw- or husk-filled mattresses, upholstered chairs, straw matting, or moldy wood in basements, these sources of infestation should be removed from the house. Mattress stuffings should be burned and the covers, if kept, washed before being refilled. Matting can be sunned and cleaned out of doors. Upholstered furniture can be sprayed heavily or drenched with clear gasoline on an open porch, or it can be sent for fumigation to a firm operating a fumigation vault. Such firms are the concerns that store household goods, those making a business of pest control, and many dry-cleaning establishments.

Placing 1 pound of flake naphthalene or paradichlorobenzene in each trunk of clothing, or 1 pound for each 100 cubic feet of space in closets and closed unoccupied rooms, will kill psocids.

Heating houses in summer to 125° F., taking advantage of the normally high heat of summer, will destroy psocids, but about 24 hours is required to heat most houses to that temperature.

Washing and ironing or brushing and sunning clothing will free it from psocids.

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